

### **REMARKS**

This is a full and timely response to the outstanding non-final Office Action mailed on January 30, 2004. Reconsideration and allowance of the application and presently pending claims 1 - 16 are respectfully requested.

#### **Present Status of the Patent Application**

Claims 1 - 16 remain pending in the present application. Claims 1 - 16 have been rejected.

#### **Withdrawal of Claim Rejections Under 35 U.S.C. §112**

Applicant thanks the Examiner for acknowledging the Office's withdrawal of the rejection to claim 16 under 35 U.S.C. §112(b).

#### **Response To Claim Rejections under 35 U.S.C. §103**

Claims 1 - 16 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over PCT Publication US91/00439 to *Buxbaum et al.* in view of U.S. Patent 5,515,081 to *Vasilik*, and further in view of U.S. Patent No. 6,526,421 to *Houldsworth*. Applicant respectfully traverses this rejection.

"The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined only if there is some suggestion or incentive to do so." *ACS Hospital Systems, Inc., v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

"There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination." *In re Oetiker*, 977 F.2d 1443, 1447, 24 USPQ 2d 1443 (Fed. Cir. 1992).

Applicant respectfully submits that the rejection of claims 1 - 16 under §103 should be withdrawn for any of the following reasons, each of which are separately discussed below:

- (1) *Vasilik* cannot be used as a basis for this rejection because it is improper nonanalogous prior art that cannot legally be relied on for a rejection under 35 U.S.C. §103;
- (2) the rejection fails to establish a *prima facie* case of obviousness because, even assuming for the sake of argument that the *Vasilik* reference can be relied on as a basis for a rejection under §103, the Examiner has not established the proper suggestion or motivation to combine *Buxbaum*, *Vasilik*, and *Houldsworth* in the manner suggested; and
- (3) the rejection fails to establish a *prima facie* case of obviousness because, even assuming for the sake of argument that the *Vasilik* patent is proper analogous art AND a proper suggestion or motivation to combine has been established, the combined teachings of *Buxbaum*, *Vasilik*, and *Houldsworth* do not teach all of the claim limitations.

**A. The Rejection of Claims 1 - 16 is Legally Deficient Because *Vasilik* (the '081 Patent) Cannot Be Used as a Basis for a Rejection under 35 U.S.C. §103 Because the Reference is Nonanalogous Prior Art**

Applicant respectfully submits that the rejection of claims 1 - 16 is improper, and therefore should be withdrawn and the claims allowed, because the *Vasilik* reference is improper “nonanalogous art” that may not legally be relied upon to support a *prima facie* case of obviousness. In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must be analogous art. In other words, the reference must be either in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. MPEP §2141.01(a); *See, In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d

1443, 1445 (Fed. Cir. 1992); *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993).

Applicant respectfully contends that no reason, suggestion, or motivation exists for the combination of *Buxbaum*, *Vasilik*, and *Houldsworth*, since *Buxbaum* apparently describes an instruction scheduler for efficiently processing repetitive programming constructs (*i.e.*, a DO-LOOP); *Vasilik* apparently describes verifying the boundaries of image information in a bitmap; and *Houldsworth* apparently describes instruction level parallelism (the execution of multiple concurrent instructions in a single clock cycle).

Unlike *Buxbaum* and *Houldsworth*, which apparently describe systems and methods for processing instructions in parallel, the *Vasilik* reference is directed to the completely unrelated field of pixel data analysis. Specifically, the cited portion of *Vasilik* (FIG. 7A and the related detailed description) apparently describe logic that determines whether boundary markers at the edge of a bitmap image representation have been correctly identified within an array of pixel data. Thus, the error checking apparently described by *Vasilik* is entirely unrelated to instruction processing. Without going into unnecessary detail, Applicant notes that the title, abstract, summary, and claims of the *Vasilik* disclosure involve details for determining the size, position, and identity of each image in a multiple-image bitmap.

Therefore, it is clear that the *Vasilik* reference is totally unrelated to instruction processing. Furthermore, one of ordinary skill in the art of the present claimed invention would not look for functional enhancements in the field of bitmap image processing. In fact, Applicant respectfully submits that such solutions are not disclosed or suggested at all in *Vasilik*. Therefore, Applicant respectfully asserts that *Vasilik* is improper “nonanalogous art” that may not be relied upon to support a rejection under §103. Accordingly, Applicant respectfully requests that the rejection be withdrawn and claims 1 - 16 be allowed.

**B. Prima Facie Case of Obviousness Not Established: No Suggestion or Motivation to Combine References as Suggested**

The rejection of claims 1 - 16 under 35 U.S.C. §103(a) should be withdrawn because the Office has failed to establish a *prima facie* case of obviousness. In order to establish a *prima facie* case of obviousness by combining references, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill, to modify the primary reference (*Buxbaum*) in the manner allegedly taught by the secondary references (*Vasilik* and *Houldsworth*). See e.g., MPEP §§2142, 2143; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir 1991); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Even though Applicant believes the §103 rejection is improper because the *Vasilik* patent is unavailable “nonanalogous art,” Applicant further submits that the Office Action fails to establish a proper motivation or suggestion to modify the alleged teachings of the *Buxbaum* and *Houldsworth* references with the alleged teaching of *Vasilik* such as to render obvious claims 1 - 16.

The Office Action rejects independent claims 1, 8, and 13, as well as dependent claims 2 - 7, 9 - 12, and 14 - 16, based on the same argument. Nonetheless, Applicant respectfully submits that the scope of these claims is not co-extensive. In the interests of brevity, however, Applicant addresses the similar rejection of the independent claims by pointing out the Office’s failure to establish the proper suggestion or motivation to combine the multiple-bitmap processing system of the *Vasilik* patent with the instruction schedulers/processors of *Buxbaum* and *Houldsworth*.

Specifically, the Office Action argues that *Buxbaum* discloses all of the elements of independent claims 1, 8, and 13 except for the inclusion of a correctness check function. The Office Action alleges that the *Vasilik* patent teaches “a correctness checking function in the instruction schedule that is called to check an argument.” The Office Action further argues that it would have been obvious to combine the teachings of the *Buxbaum* reference with the alleged teachings of the *Vasilik* patent to include the insertion of a correctness check function to determine the correctness of functions arguments as taught by *Vasilik* (column 11, lines 44 - 45).” Applicant disagrees.

It is well-established law that, in order to properly combine select elements from differing prior art sources, there must be some teaching or suggestion *within the prior art* to make the combination specifically claimed by the Appellant's invention. *W. L. Gore & Associates, Inc. v. Garlock Thomas, Inc.*, 721 F.2d 1540, 1551 (Fed. Cir. 1983). More significantly,

“The consistent criteria for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this [invention] should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. ...” ***Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure...*** In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill in the art is charged with knowledge of the entire body of technological literature, including that which might lead away from the claimed invention.”

(Emphasis added) *In re Dow Chemical Company*, 837 F.2d 469, 473 (Fed. Cir. 1988).

It has often been noted that, “[h]umans must work with old elements, most if not all of which will normally be found somewhere in an examination of the prior art.” *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1549, 220 U.S.P.Q. 193 (Fed. Cir. 1983). Furthermore, that features, even distinguishing features, are “disclosed” in the prior art is alone insufficient. As indicated above, it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. *Id.*

In this regard, Applicant notes that there must not only be a suggestion to combine the functional or operational aspects of the combined references, but that the Federal Circuit also requires the prior art to suggest ***both*** the combination of elements ***and*** the structure resulting from the combination. *Stiftung v. Renishaw PLC*, 945 Fed.2d 1173 (Fed. Cir. 1991). Therefore, in order to sustain an obviousness rejection based upon a combination of any two or more prior art references, the prior art must properly suggest the desirability of combining the particular elements.

Applicant respectfully submits that the purported motivation or suggestion provided by the Office Action is a classic example of impermissible hindsight reasoning based solely on Applicant's disclosure. In this regard, Applicant notes that the purported motivation cited in the Office Action ("to include the insertion of a correctness check function to determine the correctness of functions arguments as taught by *Vasilik*") is NOT in the *Vasilik* patent. What *Vasilik* describes in column 11, lines 44 - 45 is an error check to determine if the upper left corner marking a border of a bitmap image is complete. The determination is made by checking if a pixel value is non-zero. *Vasilik* is not checking an instruction argument. *Vasilik* apparently describes comparing a data value associated with a pixel in an array of pixels forming a bitmap. Thus, the teaching that the Office Action alleges suffices for a suggestion or motivation to combine the references fails entirely to suggest generating an initial instruction schedule from a first set of instructions, the first set of instructions including one or more instructions associated with a correctness check function, as recited in Applicant's independent claim 1. Stated more directly, a check to determine if a pixel value is non-zero in a method for identifying/processing pixels in a multiple-bitmap does not suggest generating an instruction schedule associated with a correctness check function.

Accordingly, Applicant respectfully asserts that this cited language is legally insufficient to meet the Office's *prima facie* burden of establishing a proper motivation or suggestion to combine the references. In this regard, Applicants respectfully assert that checking if a pixel value is non-zero does not suggest the desirability of combining the instruction schedulers/processors of *Buxbaum* and *Houldsworth* with the image processor of *Vasilik*. The *Vasilik* patent has nothing at all to do with managing instructions. At best, the *Vasilik* patent merely suggests the desirability of verifying that a corner marker adjacent to a bitmap image is complete.

Applicant notes that the *Vasilik* patent does not say anything about an instruction scheduler/processor that inserts a correctness check function opportunistically in a first set of instructions. Thus, Applicant respectfully submits that the *Vasilik* patent cited by the Office does not suggest the desirability of modifying the *Buxbaum* instruction scheduler. Accordingly, Applicant respectfully asserts that the Office Action fails to establish a proper suggestion or motivation to combine the references in the manner suggested. Applicant notes that the improper

combination of the *Buxbaum* and *Vasilik* references is the basis for the rejection of all claims 1 - 16. Accordingly, Applicant respectfully submits that the rejection of claims 1 - 16 is improper and, therefore, requests that the rejection be withdrawn and the claims allowed.

**C. Prima Facie Case of Obviousness Not Established: Combination Fails to Teach All Elements**

Even assuming for the sake of argument that there is some proper suggestion or motivation to modify or combine the *Buxbaum* and *Vasilik* references as the Office suggests, the combination of these references fails to disclose, teach, or suggest each and every element of independent claims 1 and 8. For this additional reason, Applicant respectfully submits that the rejection of claims 1 - 16 is improper. MPEP §2143.03.

Independent claims 1, 8, and 13 include the feature/element of “instructions including one or more instructions associated with a correctness check function.” Independent claim 1 is directed to an apparatus for performing correctness checks opportunistically. Independent claim 1 comprises “first logic receiving a first set of instructions and generating an initial instruction schedule from the first set of instructions, the first set of instructions including one or more instructions associated with a correctness check function.” Independent claim 8 is directed to a method for performing correctness checks opportunistically. Independent claim 8 comprises “receiving a first set of instructions and generating an initial instruction schedule from the first set of instructions, the first set of instructions including one or more instructions associated with a correctness check function.” Independent claim 13 is directed to a computer program stored on a computer-readable medium. Claim 13 comprises “a first code segment, the first code segment generating an initial instruction schedule from a first set of instructions, the first set of instructions including one or more instructions associated with a correctness check function.”

The Office Action admits that *Buxbaum* does not disclose this feature. Furthermore, contrary to the assertion in the Office Action, and as shown above, Applicant respectfully submits that this feature is NOT disclosed, taught, or suggested by *Vasilik*. As mentioned above, determining if a pixel value associated with a pixel is non-zero does not suggest instructions associated with a correctness check function.

*Vasilik* suggests nothing about instruction scheduling/processing. Moreover, *Vasilik* suggests nothing about modifying an instruction set to include a correctness check function in spare instruction slots. Applicants respectfully submit that, at best, this description merely suggests the feature of identifying the nature of adjacent pixels to identify a marker inserted within a bitmap.

Accordingly, and for at least this additional reason, Applicant respectfully submits that independent claims 1, 8, and 13 are patentable over the proposed combination of *Buxbaum*, *Vasilik*, and *Houldsworth* and, therefore, should be allowed. Dependent claims 2 - 7 and 9 - 12, and 14 - 16, which depend from independent claims 1, 8, and 13, respectively, are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Applicant respectfully asserts that a *prima facie* case of obviousness has not been established and request that the rejection of claims 1 - 16 be withdrawn and the claims be allowed.

**D. Prior Art Made of Record**

The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.



**CONCLUSION**

For at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that pending claims 1 - 16 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,



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